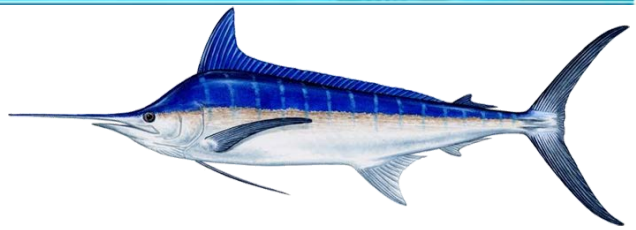
ISC International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean



The International Scientific Committee for Tuna and Tuna-Like Species in the North Pacific Ocean (ISC)

Gerard DiNardo

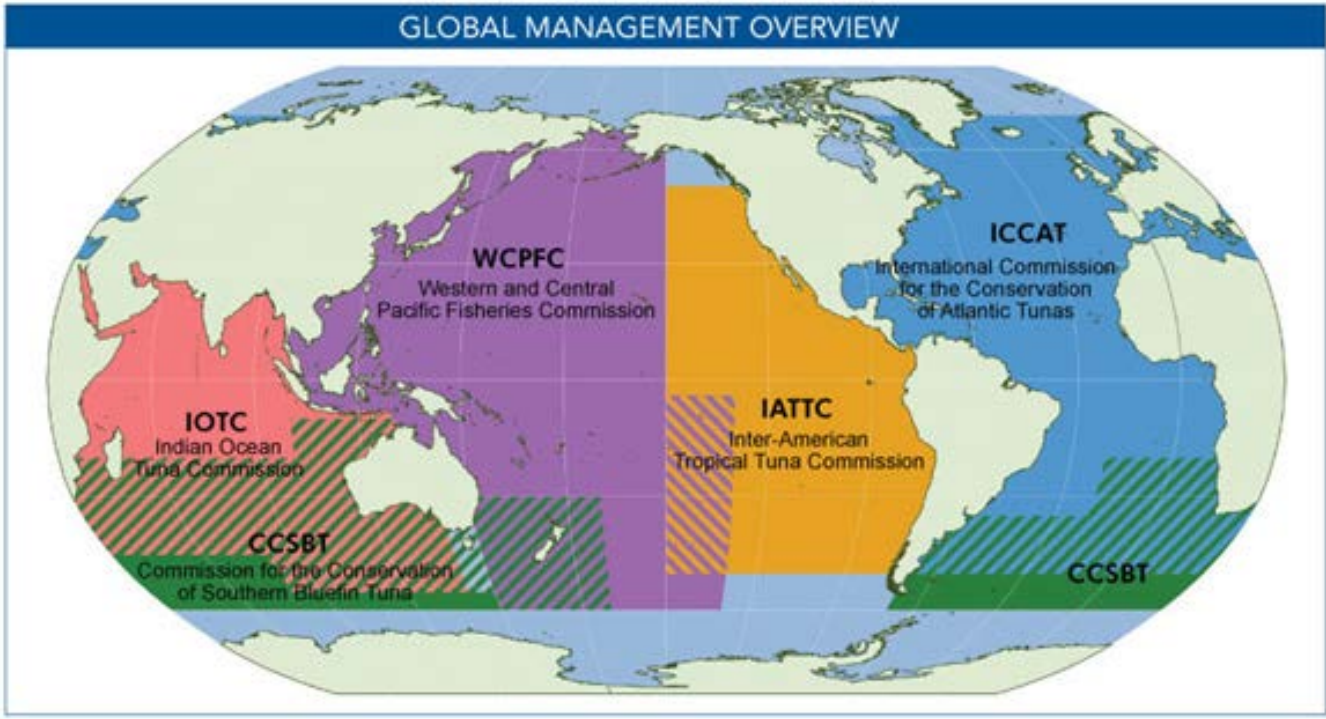
Pacific Islands Fisheries Science Center

Honolulu, HI USA

"Tuna" RFMOs (Regional Fisheries Management Organizations)

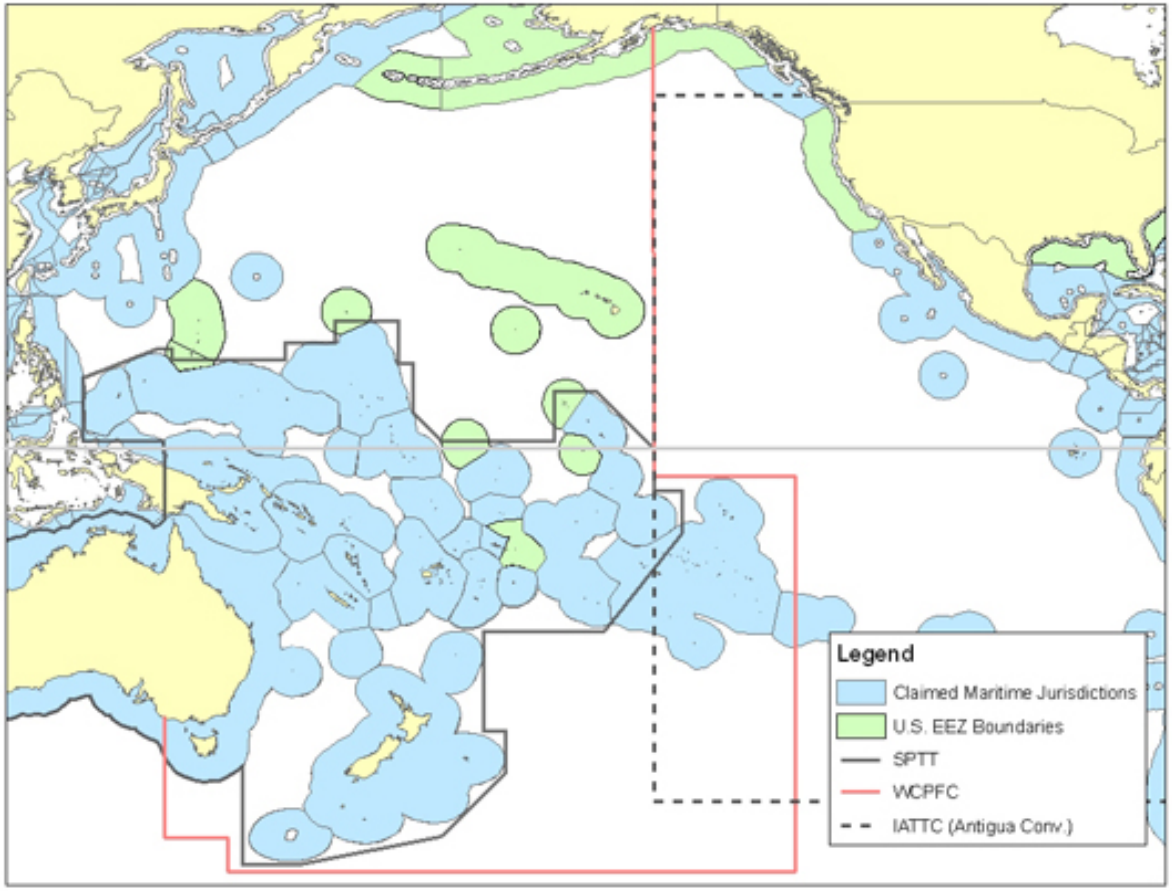
RFMO: International body made up of countries that share a practical and/or financial interest in managing and conserving fish stocks in a particular region.

Some RFMOs focus on regulating fishing for a particular species or group of species. Others have a broader "ecosystem" mandate.

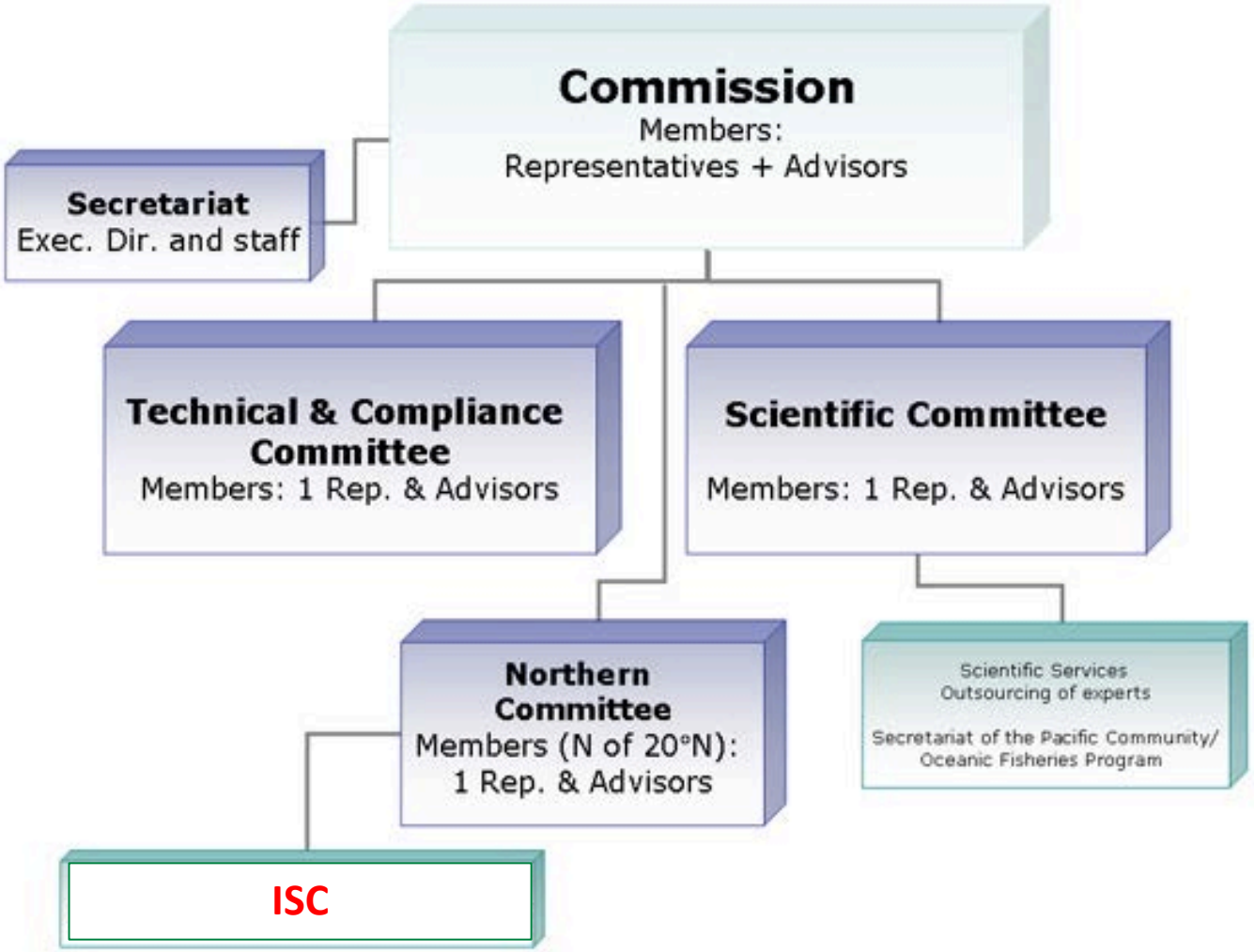


All adopt use of Best Available Science in decision-making

Principle Pacific Ocean Tuna RFMOs



WCPFC Organization Chart



What is the ISC?

- ISC is an intergovernmental body dedicated to advancing fishery science of North Pacific tuna and tuna-like fishes through cooperation and collaboration among interested parties.
- The ISC was established in 1995 through an inter-governmental agreement between the governments of Japan and the U.S.
- Membership is open to coastal states and fishing entities that border the region or that have vessels fishing for tuna and tuna-like species in the region, and to relevant intergovernmental fishery or marine science organizations.

What is the ISC's mission?

- To enhance scientific research and cooperation for conservation and rational utilization of the species of tuna and tuna-like fisheries which inhabit the North Pacific and to establish the scientific groundwork for the conservation and rational utilization of these species in the region.
- Results of the ISC stock assessments are made available to participating members and RFMOs of the Pacific Ocean.
- The ISC provides scientific support for the work of the Northern Committee of the Western and Central Pacific Fisheries Commission (WCPFC) and scientific collaboration with the Inter-American Tropical Tuna Commission (IATTC).

- **Current members of the ISC are Canada, China, Chinese-Taipei, Japan, Korea, Mexico, and the United States**

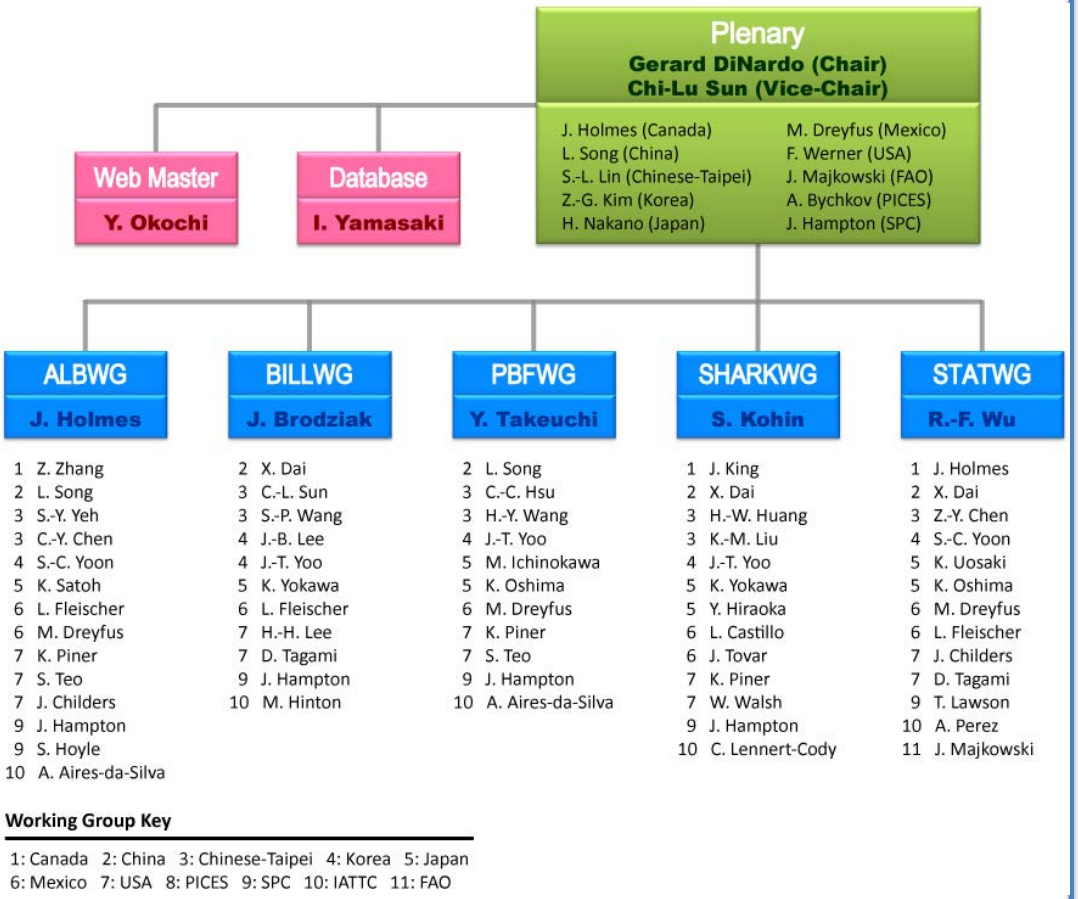
- **Non-voting members are the:**
  - **Food and Agriculture Organization (FAO)**
  - **North Pacific Science Organization (PICES)**
  - **Secretariat of the Pacific Community (SPC)**
  - **Inter-American Tropical Tuna Commission (IATTC)**

- **The Committee is organized into five Working Groups:**
  - **Statistics**
  - **Pacific Bluefin Tuna**
  - **Albacore**
  - **Billfish**
  - **Sharks**

  that report to a Plenary body.

ISC-PICES Geographic Overlap

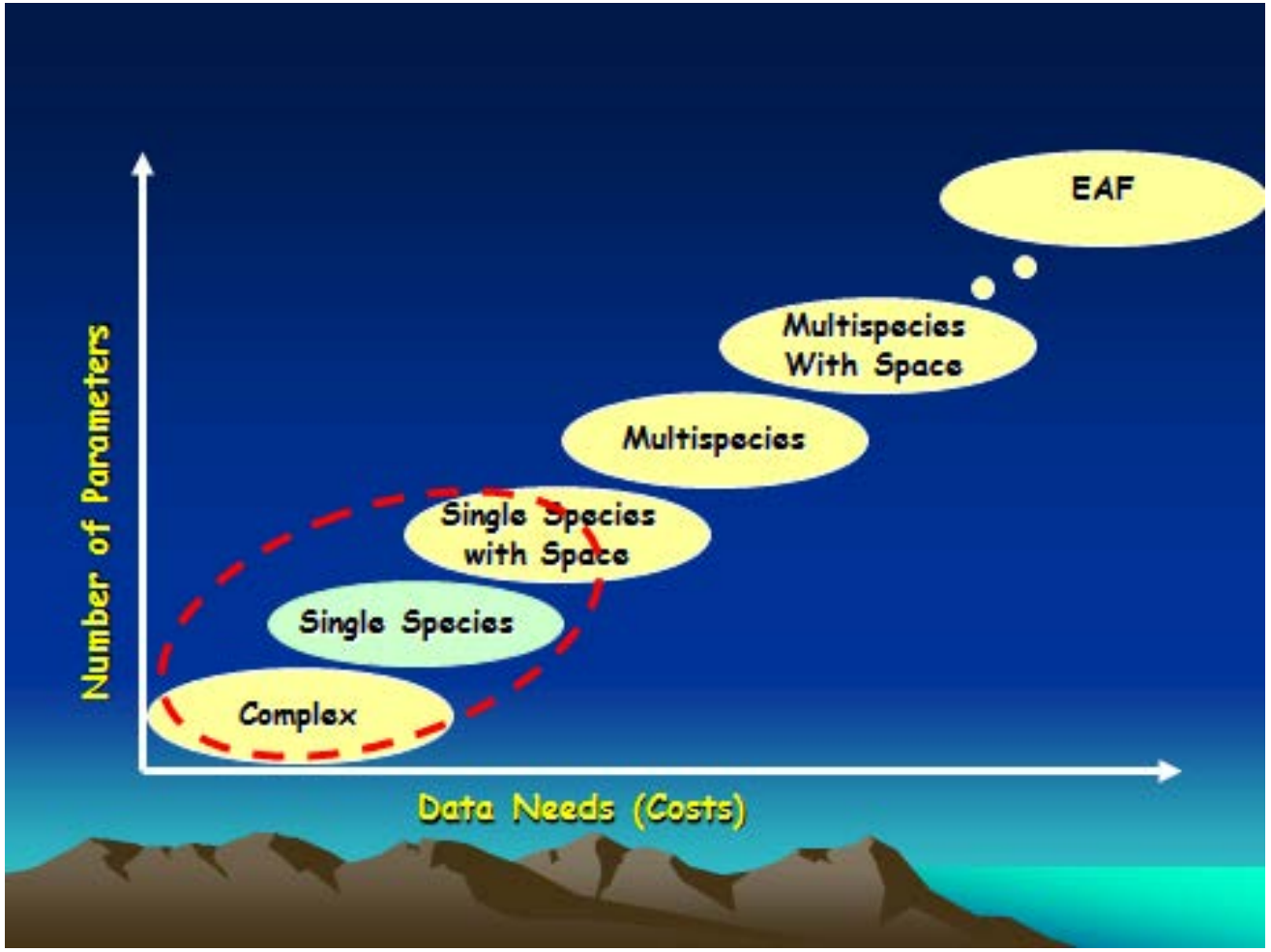
PICES



Example Recent and Future Assessments and Activities:

- **2012**
  - **Bluefin tuna assessment**
  - **Striped marlin assessment**
- **2013**
  - **Blue marlin assessment**
  - **Blue shark assessment**
- **2014**
  - **Tuna and shark age and growth workshops**
  - **Blue shark assessment**
  - **Albacore assessment**
  - **Swordfish assessment**
  - **Bluefin tuna assessment**
- **2015**
  - **Striped marlin assessment**
  - **Shortfin mako shark assessment**

Stock Assessment Complexity



Relation to environmental signals

- Pelagic/HMS species, as well as fishermen, generally cue in on environmental signals. Having a better understanding of the oceanography and associated catch, will advance our understanding of CPUE, which in turn will provide better estimates of abundance.

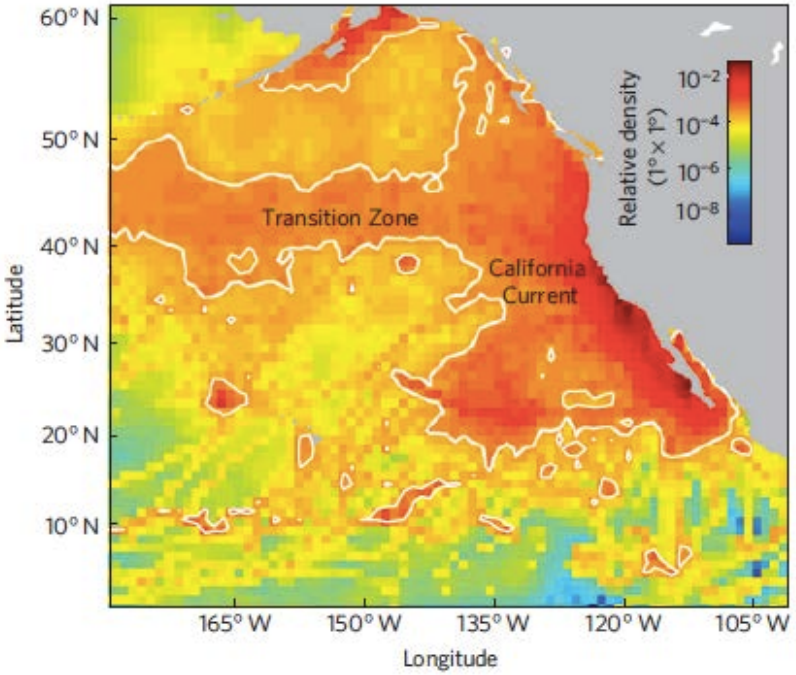
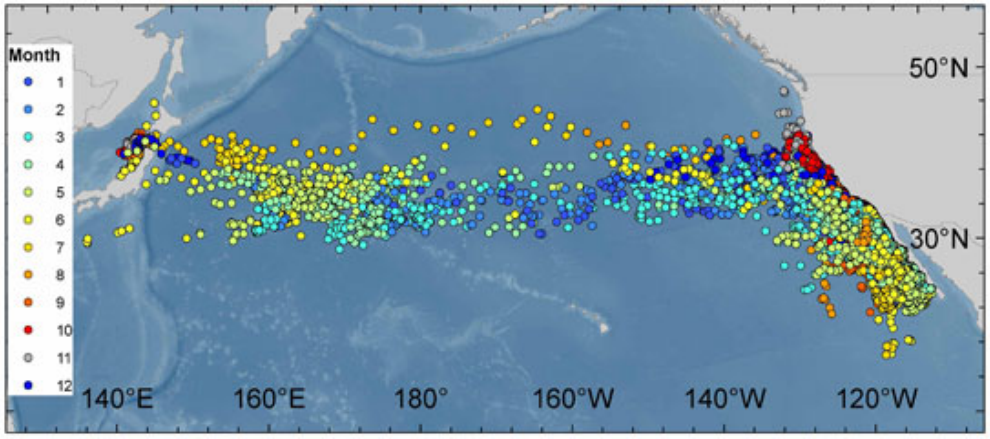
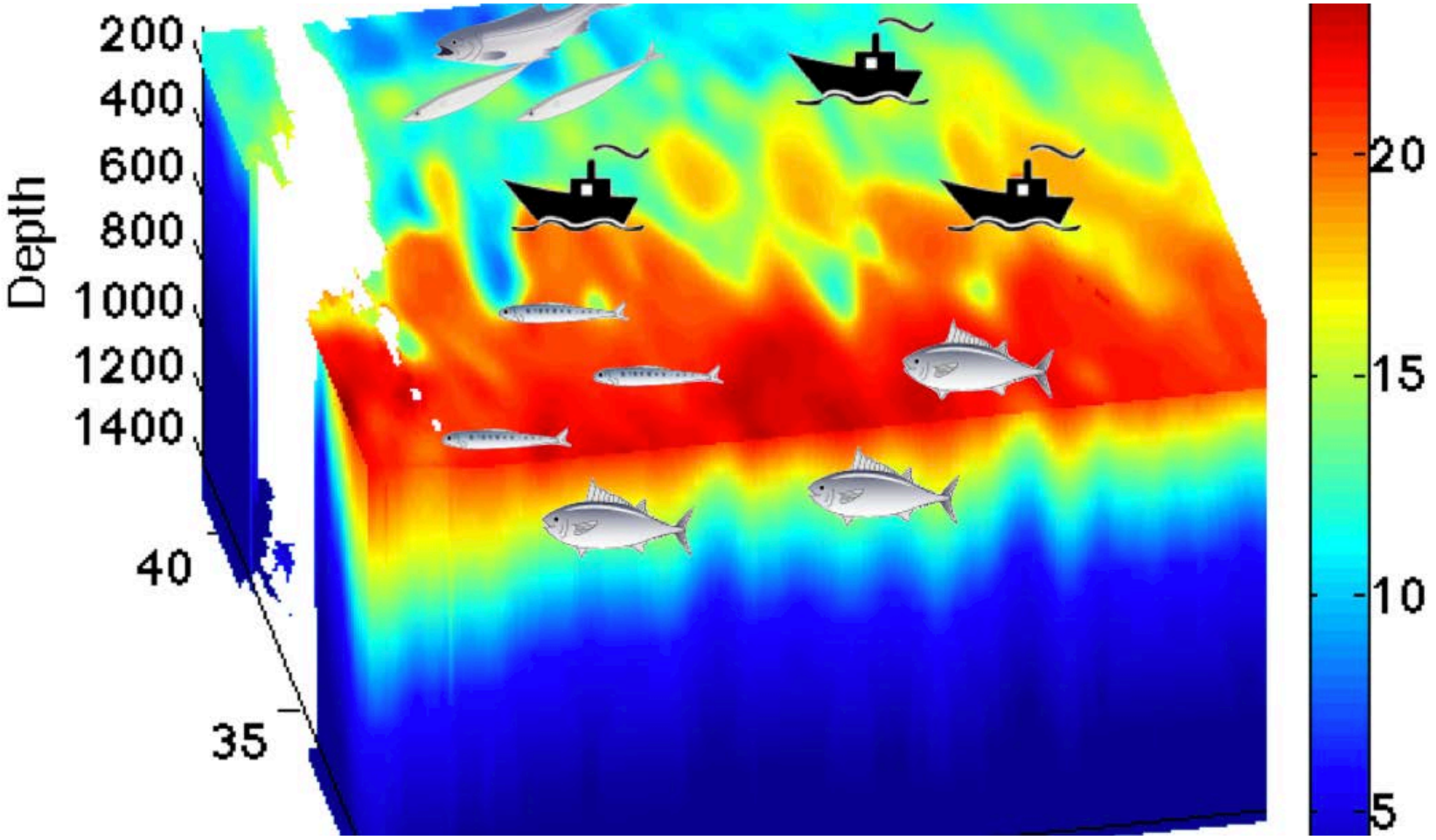


Figure 1 | Density of top predators within the eastern North Pacific.

- Linking tagging data with oceanography provides a basis for defining stock structure and even hot spots (persistent catch), both of which are important to the final stock assessment and in crafting CMMs (Conservation and Management Measures).



Estimating Effective Effort - Habitat-Based Models



Why Partner with PICES?

- Distributions and productivity of tuna and tuna-like species across the North Pacific Ocean are know to be strongly related to environmental variables (e.g., the relationship of albacore to temperature, fronts, etc.).
- Knowledge of the past several decades (~50-year) time-history of catch and distribution of these species offer insights into the relationship of these target species to abiotic conditions and provide a new footing/validation in past conditions.
- Further quantifying the distribution and abundance of these stocks to key environmental variables would allow next-generation stock assessments to be developed in a context that would include future climate change scenarios.
- The proposed Session/Working Group meeting between ISC and PICES would enable the initial developments of quantitative links between North Pacific environmental variability and ISC highly migratory species.

Thanks!

(http://isc.ac.affrc.go.jp